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A new site for, and observations on *Serinus flavigula* in Ethiopia, with comments on its taxonomic status

by J. D. Atkins & W. G. Harvey

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At 16.30 h on 18 September 1993 we were negotiating the rocky track to the north side of the crater rim of Fantalle Mountain (9°00′N, 39°54′E) in the Awash National Park of Ethiopia searching for *Serinus* species. A party of six or seven small finches flew from the top of a roadside acacia, crossed the road and settled on low plants of *Lavandula coronopifolia* on the edge of a gully with low sparse acacia trees, 80 m away. The birds looked slim and very pale with striking, extensive bright yellow rumps. Although not particularly shy, they were extremely restless, moving from plant to plant over an area of about 500 m^2. We were able to watch them down to 7 m for ten minutes and took detailed descriptions. The site is at 1410 m altitude.

Subsequent records

On 20 November 1993 JDA together with Yilma Dellelegn, Michel Gunther, Philippe Gautier and Xavier Eichaker encountered three similar birds on the same track at 1310 m altitude feeding on open ground under an acacia tree. On 21 November groups of one, two and three birds were found in the same area feeding on long, dry grass clumps on rocky slopes. On both days the birds were very restless, flying readily and almost vertically, up into the trees and often up to 1 km away. Further detailed descriptions were taken, but they were still unidentified.

On 12 February 1994 the authors and Yilma Dellelegn searched the two original sites without success. A particularly severe dry season had decimated ground cover and no seeding grasses or *Lavandula* were found. However the birds were located from the top of the track along the crater rim at 1600 m, mainly flying out of the crater. They used a fairly narrow flight path and flew high and strongly in the direction of the only available fresh water, about 15 km distant at Sabure Fruit Farm and the Kassam River. Others were seen feeding, mainly on remnant *Lavandula* on the steep inner slopes of the crater up to 30 m below the rim. Between 10.30 and 13.40 h a maximum of 29 individuals was seen and detailed descriptions were taken. On 13 February at the same site, similar behaviour was noted and up to 30 birds were seen between 09.55 and 12.30 h. One specimen was collected with a permit from the Ethiopian Wildlife and Conservation Organisation.

On 25 September 1994 the authors and Jukka Harjula unsuccessfully searched the two original sites and other apparently suitable areas. However between 12.00 and 13.00 h we watched up to 11 individuals feeding on the inner crater walls on *Lavandula*. Only one was seen to leave the crater, and it did not fly very far. At this time there was plenty of standing water in the area, including within the crater itself.

Field description

Apart from one characteristic (the wing-edgings), all the birds seen appeared identical on all occasions and there is complete consistency in the field descriptions. The following is a summary of detailed notes taken on the six occasions that the birds have been seen.

General impression. Slim linnet-like seedeaters with long wings, quite long tails, very plain, pale underparts and predominately plain, greyish upperparts. The most striking feature on all birds was the extensive bright yellow rump. They lacked the dumpy appearance of Serins *Serinus serinus*, Streaky Seedeaters *S. striolatus* and Yellow-rumped Seedeaters *S. atrogularis*, and had a superficial resemblance to a small Yellow-spotted Petronia *Petronia pyrgita*.

Head. Plain greyish-brown (the greyest part of the bird) with short, fine, darker crown streaks, indistinct whitish supercilia which meet above the bill, darkish lores and around eye. Throat whitish. Eye dark. Bill horn colour, darker on upper mandible.

Upperparts. Plain greyish on nape becoming progressively darker and browner on mantle which was very indistinctly streaked. Wings browner with pale edges to median coverts. The birds seen in

September 1993 showed bright lime or apple green edges to the primaries creating a panel similar to, but brighter than, that of a Streaky Seedeater. This feature was not noted on the November birds, on only one of the February birds and on one of the September 1994 birds. It is therefore probably only visible on very fresh plumage. Rump strikingly bright canary-yellow, both richer and more extensive than on Yellow-rumped Seedeaters. This colour appeared to extend onto the upper tail coverts and down the sides of the rump so that it was visible on stationary birds with folded wings. Wings quite long, extending beyond end of upper tail coverts. Tail also quite long, dark brown, darker towards tip and notched. No white or yellow visible on it.

Underparts. Completely unstreaked or spotted (but see hand description). Throat whitish. Lower throat and upper breast had an oval-shaped, rather diffuse pale yellow area which was not at all obvious in the field except when ruffled by the wind. Below this a diffuse greyish band contrasting with off-white belly and undertail coverts. Whitest on undertail coverts. Feet and toes flesh-coloured.

Vocalisations. A canary-like *sip, sip, sip* or *sip sip* given in flight between food plants. In February a brief, simple song heard once from a bird perched at 4 m in an acacia. Similar to call but more musical and best rendered as *zeet ze ze zee* with a lower tone to the middle two notes.

Habits

The birds favoured sparsely vegetated rocky slopes, including the crater walls, feeding on tall clumps of dry grass and particularly *Lavandula coronopifolia*, which is common. Only in November were they seen feeding on seeds on the ground. Characteristically they were very restless, flitting in groups of up to seven (most usually two or three) from food plant to food plant over a wide area. This behaviour is reminiscent of Citril Finches *Serinus citrinella* watched feeding on mountain slopes in Asturias, Spain, in July 1994 by WGH. When disturbed, or travelling apparently to water, they flew off strongly often initially almost vertically upwards, and then covered long distances. Their long-winged, long-tailed appearance gave them a curiously streamlined, powerful mien and may be an adaptation to flying up steep slopes, particularly those of the inner crater walls. They perched on the upper branches of trees (mainly acacia) up to 6 m and on branches of small shrubs or saplings growing from rock faces. They rarely perched on rocks and could be remarkably inconspicuous, particularly when viewed from above. The flash of bright yellow rumps was often the only way to pick them out. No other *Serinus* species were seen on Fantalle Mountain.

Hand description

The following description was taken of an unsexed individual on 13 February 1994 immediately on collection. The specimen is deposited in the National Museum of Ethiopia, Addis Ababa.

Eye. Iris brown; bill pale horn, slightly darker and pinker on the culmen, tarsus pinky brown; soles slightly paler, claws pinky brown, paler below.

Head. Grey-brown, darker on the lores with pale dirty greyish-white wash below and slightly behind eye. Obvious cleaner white supercilia extending to just behind the eye. (This characteristic seems to have been obscured by the skinning process.)

Crown. Short distinct dark brown feather centres giving brown streaked appearance, fading on the nape; on forehead dark brown feathers give almost spotted effect.

Underparts. Narrow white chin and throat, yellow wash on upper throat, stronger from central throat to upper breast, long oval or capsule-shaped. Chest mouse/warm greyish-brown with faint smoky blackish marks almost 1 cm below the throat, giving suggestions of residual but indistinct band (cf. *S. xantholaema*); this slightly darker smudging being the effect of slightly darker centres to the feathers. There is no suggestion of streaking in these markings. (This smudging had not been visible in the field on any of our sightings.) Mouse-brown breast becomes paler abruptly at bottom of breast and extends thus down to belly: undertail coverts slightly washed pale yellow. (This is, again, not a field character.) Flanks uniform colour with breast: mouse-brown.

Upperparts. Neck brownish-grey with less prominent streaking, although contrast with streaked crown not as obvious as in field. Mantle darker warm brown, with darker brown feather centres creating diffuse darker streaking, which is visible in the field. Rump bright canary yellow extending round sides to white undertail coverts. Uppertail coverts, half hidden but long, greenish yellow, browner towards tips. Solid brown tail, with no white; central two tail feathers heavily abraded.

Wings. Darker and less grey than other mouse-brown body parts. Paler fringes to the coverts, including lesser coverts. Greenish wash and sheen on lesser coverts; almost iridescent and not visible in the field. Inner primary outer webs with indistinct greenish wash, only visible in sunlight. Outer primaries with whitish edges, but effect almost certainly of abrasion. This abrasion may have taken away the green panel visible on one bird seen on 13 February. Underwing coverts paler mouse-brown, with slight suggestion of yellow on bastard wing area. Wings reach end of upper tail coverts, giving long-winged, linnet-like appearance.

Measurements. Length 112 mm. Wing (flattened) 66 mm. Tail (from cloaca) 49 mm. Tarsus 16 mm. Bill not measured as tip broken by shot.

Discussion

The *Serinus* of Ethiopia have long presented an interesting taxonomic problem occasioning much discussion in the literature (Irwin 1960, Rand 1968, Erard 1974, Van den Elzen 1985, Ash & Gullick 1989, Clement *et al.* 1993). Although sharing some characteristics with Salvadori's Seedeater *S. xantholaema* and "Northern Yellow-rumped Seedeater" *S. xanthopygius* (formerly regarded as a race of the Yellow-rumped Seedeater *S. atrogularis*), the Fantalle birds are apparently closest to Yellow-throated Seedeater *S. flavigula*. This species is known from only three sites, all within an area of about 30 km^2, 64 km north of Fantalle Mountain below the eastern escarpment of the West Highlands. The specimens were

collected in 1880, 1885 and 1886, and it was not reported again until 1989 (Ash & Gullick 1990). The altitudes (1440–1500 m) and the habitat (broken arid country on rocky hillsides along the valley of a small stream) are similar to the Fantalle site which, interestingly, is the next southerly area of comparable highland in the extensive, dry bushland of the Awash.

Ash (pers. comm.) has compared the Fantalle specimen with a specimen of *flavigula* on loan from Turin and with the only specimen of *S. xantholaema* in the British Museum (Natural History), Tring. His view is that the Fantalle bird shares some of the characters of both *flavigula* and *xantholaema* but approaches the former more closely. He also considers, owing to a lack of sufficient evidence, that it is premature to come to a firm conclusion on its precise taxonomic status. We are in agreement with this.

The only three specimens of *flavigula* are old and discoloured through being soiled and foxed (on the evidence of the loaned Turin specimen and as mentioned in Erard 1974). The field description of the 1989 sightings of *flavigula* (Ash & Gullick 1990) differ in some respects from the Fantalle birds and from the Turin specimen. In particular the 1989 *flavigula* were described as having pale dull yellow rumps (compared with the bright canary yellow of the Fantalle birds), and lacked the supercilia present in the Fantalle birds. Additionally, no traces of any greenish edgings to the wing feathers were noticed in the 1989 sightings, although this is apparently a seasonal character noted in the original description of *flavigula* (*remigibus et rectricibus exterius vix virescente limbatis*: Salvadori 1888), and only noted on occasions in the field on the Fantalle birds.

Further examination of this Ethiopian group of *Serinus* is required, including DNA analysis, before a final decision can be made on the status of the Fantalle birds. It is, however, of interest to place the Fantalle birds on record, in order to draw attention to this population of *Serinus*, but to describe them as a new taxon on present evidence would be premature. It is possible that they may be shown to be a link between *flavigula* and *xantholaema*. Their similarity to *S. xanthopygius* also needs to be examined further. The consistency in appearance in the Fantalle birds does not suggest that they could be hybrids.

Ash suggested that Erard, because of his particular knowledge of Ethiopian *Serinus*, should be asked to evaluate the Fantalle specimen. The following is a resumé of his detailed comments, following his examination in December 1994. Erard immediately identified the Fantalle specimen as *S. flavigula* because of its resemblance to the birds he named as *flavigula*; the three specimens examined by Salvadori referred to in Erard (1974). As a fresh specimen it looked much brighter, whereas Salvadori's specimens of over 100 years old were much soiled and foxed. There are no *flavigula* in the Paris Museum, but Erard still had his notes resulting from his examination of the four *S. xantholaema* and the series of *S. xanthopygius*, *S. atrogularis reichenowi* and *S. dorsostriatus maculicollis* used in his paper (Erard 1974). His measurements of the Fantalle specimen using his previous method gave a wing-length of 65.5 mm and a tail length of 47 mm,

so that its tail/wing index placed it among the upper values of *S. xantholaema* but not far away from *S. flavigula* and *S. xanthopygius* in Figure 3 of his paper. It is necessary, in a comparison based on small samples or single specimens, to be careful not to regard as taxonomic characters what in reality belongs to individual variation. For example, yellow rump colour may vary in intensity in relation to food and of course, with the age of the specimens; it would be interesting, for instance, to examine whether the oil in *Lavandula* could intensify the yellow pigment.

The Fantalle specimen was very similar to Erard's six specimens of *S. xanthopygius* collected in 1968 and 1970, except for its yellow throat patch and sharper striation of the upperparts. The dark blobs of brownish colour below the yellow throat patch are less visible than in most *xanthopygius* but are not comparable with the well-defined upper-breast band of *xantholaema*. The greenish edgings to the wing feathers are hardly discernible on the Fantalle specimen; probably since this is a seasonal character, also found in *xanthopygius* and *xantholaema*. The breast and flanks of the Fantalle specimen are deeply suffused with brownish-grey, unlike those of *xantholaema* but like several *xanthopygius*, particularly the two Erard (1974) referred to as probably immatures. The pattern of striation of the upperparts varies individually in all *Serinus* available in Paris, so its value in such comparisons is limited.

In Erard's opinion, the birds seen in 1989 by Ash & Gullick (1990) and the Fantalle birds (as judged by the collected specimen) belong to the same species, *Serinus flavigula* Salvadori. Erard does not think they represent different subspecies, but noted that a comparison of specimens from both localities would be necessary to ascertain this. He maintained his earlier view that *xanthopygius* and *flavigula* are closely related but emphasised that more field work was still necessary, as well as mtDNA analyses, before a firm conclusion could be reached on their relationship. Such studies should include *S. flavigula*, *S. xantholaema*, *S. atrogularis*, *S. xanthopygius*, *S. dorsostriatus* and *S. leucopygius*, and also, if possible, the enigmatic white-rumped serin seen by Ash in 1970 and others subsequently, including Jarry and himself in 1971.

The Fantalle *Serinus flavigula* appear to exist in isolation on Mt. Fantalle in the Awash National Park in a population of at least 30 similar birds, and possibly several hundreds in view of the extent of the preferred habitat. It is remarkable that, if always present, they have escaped notice over the years in a relatively well-watched area. The same remark was made about the new *Serinus ankoberensis* discovered only 70 km away in 1976 (Ash 1979); and, even closer, *flavigula* only 64 km away had not been seen for over 100 years until rediscovered in 1989. Interestingly, the present Fantalle birds were found while we searched for another unidentified *Serinus*, the white-rumped bird found by Ash in 1970 near the base of Mt. Fantalle, and for which he now has about ten reported sightings in the subsequent 20 years. This form still awaits a published description.

It is hoped that this paper will alert other observers of *Serinus* in Ethiopia and encourage further research into a group which appears to

have particular evolutionary significance in that country. JDA (at the address below) will be very happy to receive and collate future interesting *Serinus* records from Ethiopia.

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Notes on feeding behaviour, diet and anting of some cotingas

by Andrew Whittaker

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The following observations were made between 1987 and 1995, mostly in forest reserves of the Projeto Dinamica Biológica de Fragmentos Florestais (PDBFF), which consist of virgin *terra firme* forest and mosaics of *terra firme* forest with agricultural development (mostly cattle pasture). The reserves are situated 50–80 km north of Manaus.